

REMARKS

The Present Invention and the Pending Claims

The present invention relates to a production method of a racemic 3-hydroxy-3-(2-phenylethyl)hexanoic acid C₁₋₆ alkyl ester. Claims 19 and 21-25 are pending.

Amendments to the Title and Claims

The title has been amended to better comport with the claims.

Claim 19 has been amended so as to more particularly point out and distinctly claim the subject matter. In particular, the element of claim 20 has been added to claim 19, and claim 20 has been canceled accordingly. In addition, claim 19 has been amended to recite C₁₋₆ alkyl ester, which is supported by the specification at, for example, page 11, line 33, through page 12, line 4.

No new matter has been added by way of these amendments.

Summary of the Office Action

Claim 19 has been rejected under 35 U.S.C. § 112, second paragraph, as allegedly indefinite. Claims 19 and 21-25 are rejected under 35 U.S.C. § 103(a), as allegedly obvious in view of Sorger et al. (U.S. Patent No. 6,605,716) in combination with Moriwake (*J. Org. Chem.*, 31: 983-985 (1966)). The status of claim 20 is not discussed in the remarks section of the Office Action; however, in the Office Action Summary, claim 20 is noted as rejected. Reconsideration of the pending claims is hereby requested.

Priority Documents

According to the Office Action Summary, the claim for priority has been acknowledged but purportedly none of the certified copies of the priority documents has been received by the Patent Office. Applicants note that the present application is a divisional of U.S. Patent Application No. 10/320,325, filed December 16, 2002. The priority documents were filed in connection with the parent application. Applicants respectfully request acknowledgement in the present application that no further action need be taken by applicants in the present application with respect to the certified copies of the priority documents.

Discussion of the Section 112, Second Paragraph

Claim 19 has been rejected under 35 U.S.C. § 112, second paragraph, as allegedly indefinite. According to the Examiner, claim 19 is indefinite because the esters produced by

the claimed process are not specified. In addition, the Examiner questions what haloacetic esters are required in order to carry out the claimed process.

Claim 19 has been amended to recite C₁₋₆ alkyl ester for both the starting material and product. At page 11, line 33, through page 12, line 4, the specification describes the ester as a starting material. The alcohol part of the ester does not change between the starting material and the product (see, for example, page 10, Scheme 1). Therefore, the description of a C₁₋₆ alkyl ester is an accurate description of both the starting material and product. In view of this amendment, the indefiniteness rejection should be withdrawn.

Discussion of the Obviousness Rejection

Claims 19 and 21-25 are rejected under 35 U.S.C. § 103(a), as allegedly obvious in view of Sorger et al. (U.S. Patent No. 6,605,716) in combination with Moriwake (*J. Org. Chem.*, 31: 983-985 (1966)). The Examiner contends that the Sorger et al. reference discloses the preparation of methyl 3-hydroxy-3-(2'-phenylethyl) caproate via the Reformatsky reaction, comprising preparing the corresponding zinc enolate of ethyl acetate using trimethylchlorosilane and reacting the enolate with 1-phenylhexan-3-one (Example 5). The Examiner concedes that the Sorger et al. reference fails to teach the use of a magnesium enolate in place of the corresponding zinc enolate. The Moriwake reference reportedly discloses that use of a magnesium enolate can improve the yield in a Reformatsky reaction, especially when used with *t*-butyl esters. Thus, according to the Examiner, it would have been obvious to replace zinc with magnesium, as allegedly suggested by the Moriwake reference, in the reaction disclosed in the Sorger et al. reference.

Independent claim 19 has been amended to recite a production method of a racemic 3-hydroxy-3-(2-phenylethyl)hexanoic acid C₁₋₆ alkyl ester, which comprises reacting magnesium, chloroacetic acid C₁₋₆ alkyl ester, and 1-phenyl-3-hexanone. Thus, all the pending claims require the use of a chloroacetate.

The Sorger et al. reference also describes a wide range of compounds as the compounds of the formula (3). However, the Sorger et al. reference specifically describes α -bromocarboxylic esters (col. 5, lines 23-30) and the use of ethyl bromoacetate (Example 1), methyl bromoacetate (Examples 2, 4-7, and 9), and methyl 2-bromopropionate (Examples 3 and 8). The Sorger et al. reference does not teach or suggest the use of a chloroacetate.

The Moriwake reference discloses that the Reformatsky reaction can be performed in a high yield even when magnesium is used instead of zinc for a reaction with ketone in ether using *t*-butyl bromoacetate. However, the Moriwake reference is completely silent on the use of a chloroacetate.

In re Appln. of Tanaka et al.
Application No. 10/727,398

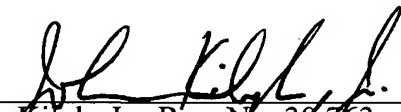
Thus, neither of the cited references discloses the use of a chloroacetate, which is required by claims 19 and 21-25. The Examiner presumably has considered this point, because claim 20 apparently was not subject to the obviousness rejection.

For the foregoing reasons, the Sorger et al. and Moriwake references, whether considered alone or in combination, do not teach or suggest all of the elements of the production method of a racemic 3-hydroxy-3-(2-phenylethyl)hexanoic acid C₁₋₆ alkyl ester of the present invention. As a result, the present invention, as defined by claims 19 and 21-25, is not obvious in view of these references, and the obviousness rejection should be withdrawn.

Conclusion

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,



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